

POLYMORPHIC COMPUTATIONAL SYSTEM AND METHOD IN SIGNALS INTELLIGENCE ANALYSIS

Abstract of the Invention

Configuration software is used for generating hardware-level code and data that may be used with reconfigurable/polymorphic computing platforms, such as logic emulators, and which may be used for conducting signals intelligence analysis, such as encryption/decryption processing, image analysis, etc. A user may use development tools to create visual representations of desired process algorithms, data structures, and interconnections, and system may generate intermediate data from this visual representation. The Intermediate data may be used to consult a database of predefined code segments, and segments may be assembled to generate monolithic block of hardware synthesizable (RTL, VHDL, etc.) code for implementing the user's process in hardware. Efficiencies may be accounted for to minimize circuit components or processing time. Floating point calculations may be supported by a defined data structure that is readily implemented in hardware.